# The Vindicia Taxation Solution for Online Merchants

## Tax: Introduction and History

In the world of ecommerce, online merchants face many challenges. From PCI compliance to preventing fraud and retaining loyal customers, there are many hurdles to running a successful online business. One of the least understood, yet critically important issues is taxes. Specifically, how online merchants calculate and apply the appropriate taxes. In some places, such as the European Union, this is as simple as a flat rate that is added to all transactions (VAT). Tax laws in the US, as we describe below, have much more complexity while tax codes in most other countries fall somewhere in between these two.

There are two main types of tax in the US, sales tax and use tax. Sales tax is a levy placed on goods when they are purchased. Use tax is the corollary to sales tax; it is collected when goods purchased outside of a tax jurisdiction (without tax) are consumed or used within a taxing jurisdiction. The burden falls on merchants to collect and report sales tax, and increasingly use tax on behalf of their customers. In theory, consumers are required to keep records of all use tax for which they are liable and report them on their applicable income tax forms. In practice, however, over 99% of individuals fail to report use tax and it is considered “lost” governmental revenue.

Sales tax first became a popular form of income for states and local governments during the Great Depression of the 1930s when income tax revenues plummeted (24 states first adopted their sales tax between 1930 and 1938). Out of necessity, local conditions and politics, each local government (city, county, state, and special districts) developed their own tax rules. As a result, 45 states and the District of Columbia collect sales tax on goods and some services and combine with regional and city governments to form over 11,500 separate tax jurisdictions in the US today. Accurately determining jurisdiction and understanding the rules on which items are taxed is, at the least, convoluted and confusing.

To give a quick example, in Tennessee, the sale of any good (if not tax exempt) is subject not only to the state sales tax of 7%, but the local sales tax on the first $1,600, plus an additional state sales tax of 2.75% on the second $1,600, all of which cannot exceed $3,200 - potentially subjecting a sale to a 9.75% sales tax rate.

## Problems for Merchants

These confusing rules make it difficult for merchants to accurately calculate and report their tax obligations. To further complicate matters, tax legislation has not quite caught up to the notion of online commerce, which leads to even more ambiguous definitions and rules (e.g., many states tax digitally delivered software, but not digital music). Tax legislation is also constantly changing. In 2007 alone, there were over 1,400 tax code updates in the US.

For merchants to determine how much tax they should collect, they first need to determine their tax nexus. A nexus is when a merchant has any physical presence in the same jurisdiction as their buyer. The presence does not need to be large; even boxes of software sitting on a shelf can constitute a physical presence. This presence is a connection to the state, county, city or other special taxing district and renders the merchant liable for sales tax on that transaction, depending on the type of goods sold. An example of how the tax rate varies per jurisdiction is highlighted in Tables 1 and 2.

Because of the confusion around when merchants should, or should not collect sales tax or use tax, merchants must make their own decisions on how to comply. If merchants decide to collect tax, they must prepare a filing every month with the appropriate forms for each jurisdiction in which they are collecting taxes. If they do not file on time, or underpay their tax obligations, they will be fined and charged interest (8%-10% depending on the state) on all money they owe.

To quickly recap, merchants must figure out whether or not to collect taxes for each transaction they process. This depends on the merchant's nexus, location of the buyer (tax jurisdiction) and the type of good they are selling (taxable status). After they have collected taxes, they must file a monthly report for each jurisdiction in which they have done business along with a check for the total amount of tax collected. If this is not done correctly, merchants face fines and interest charges on the money they owe, or even the possibility of being shut down.

Penalties and fines only result if an audit is performed, but as more state governments face shrinking revenues and budget shortfalls, audits are becoming more common. If a company is audited and found to owe taxes, the merchant can be required to pay back taxes as far back as the statute of limitations applies.

| Customer Location | Point of Sale | Nexus | Software Type | State Tax Rate | Local Tax Rates | Tax Collected |
|---|---|---|---|---|---|---|
| Boise, ID | Boise, ID | Yes | Retail Box | 6.00% | - | 6.00% |
| Ketchum, ID | Online | Yes | Digital Delivery | 6.00% | 1.00% | 7.00% |
| Lewiston, ID | Lewiston, ID | Yes | Retail Box | 6.00% | 0.50% | 6.50% |
| Sun Valley, ID | Sun Valley, ID | Yes | Retail Box | 6.00% | 2.00% | 8.00% |
| Alameda, CA | Online | No | Digital Delivery | 8.75% | - | - |
| Alameda, CA | Online | No | Retail Box | 8.75% | - | 8.75% (use tax) |
| Chicago, IL | Chicago, IL | Yes | Retail Box | 7.50% | 2.75% | 10.25% |

***Table 1:*** *Nexus & local jurisdiction for a software merchant based in Idaho and selling software in a retail box and also as a digital download. For the purpose of example, retail sales assumed to only occur online and in ID & IL.*

| Customer Location | Digital Software Tax Classification | Sales Tax Rate | Use Tax Rate | Taxable Status | Tax Rate Collected |
|---|---|---|---|---|---|
| Alameda, CA | Electronic Data | 8.75% | 8.75% | Exempt | - |
| Seattle, WA | Tangible Property | 9.00% | 9.00% | Taxable | 9.00% |
| Chicago, IL | General Retail | 10.25% | 6.25% | Taxable | 6.25% |
| Birmingham, AL (Jefferson County) | General Retail | 6.00% | 6.00% | Taxable | 6.00% |
| Birmingham, AL (Shelby County) | General Retail | 5.00% | 5.00% | Taxable | 5.00% |
| Toronto, Ontario | Tangible Property | 8% (RST) | - | Taxable | 8.00% |
| Munich, Germany | Goods | 19% (VAT) | - | Taxable | 19.00% |

***Table 2:*** *Tax Scenario example for an online software merchant with a California only nexus that offers digital delivery for their software, and has chosen to collect use tax on behalf of their customers even though it is not required by law.*

## Calculating Taxes with Vindicia CashBox™

Vindicia CashBox has technology built-in to help merchants accurately meet their tax collection and reporting burdens. Our process for calculating sales tax begins with determining where the customer is located. To do this, CashBox goes through the process outlined below:

1. Clean & standardize the customer's address
2. Fix the address and match it to actual location
    a. Use the US Census Database to find missing address details in US
    b. Determine country for all other addresses
3. Search our up-to-date tax database and determine the correct tax rates for each associated jurisdiction
4. Determine nexus and product category
    a. Reference merchant's nexus list and product specific taxable category for each line item in the transaction
5. Check for merchant rules and exemptions
    a. Customer exemptions
    b. Merchant specific jurisdiction rules
6. Correctly apply the tax rates to the transaction

First, we look at the provided address (either billing or shipping depending on the merchant and availability), then clean and standardize it. This involves getting rid of punctuation, abbreviating certain words (e.g., Fort becomes FT. and North becomes N.), converting everything to uppercase and spelling out numbers (e.g., 3rd becomes THIRD).

Secondly, we fix the addresses. Many taxes are computed on both the state and the county where the buyer is located, but most merchants do not require entering the county as part of the address. It is also very common for customers to enter incorrect data through misspellings and errors (e.g., Blvd. versus Ave.).

These corrections are done automatically based on country-specific rules. Again, the US is the most complicated simply because the number of jurisdictions means precision is critical to accurately calculate the correct tax rate. Canada, for example, is much simpler.  Each of the 10 provinces and three territories has its own tax rate and rules, and the province information can be derived from the postal code or even the city.

The next step in fixing the address involves matching it with an actual location. In the US, we leverage an address database from the US Census Bureau (Tiger) that includes road segments with matching house numbers (and Latitude/Longitude coordinates). Then our tax engine scans through the database for matching segments of road names and house numbers for each county in the state. This is how we match the correct county information to the address and also correct some of the common mistakes listed above (misspellings, wrong city, etc). For customers outside the US, our database maintains the applicable tax rates by jurisdiction or simply by country as necessary.

After we have determined the actual location and therefore jurisdictions, the next step is to determine which tax rates should be applied by searching our tax database to find the correct rates. If multiple rate entries are applicable, our tax engine uses tested logic to combine them intelligently and ensure consistent rate calculation for our merchants. The Vindicia tax database is updated on a monthly basis to reflect changes in the tax codes.

At this point, we know exactly where the customer is located and what tax rate should be applied to their transaction. We then check the merchant's nexus and product rules for each transaction. As expected, there may be additional calculations required to determine how the taxes are applied as some tax rates are variable depending on the amount of the transaction. For example, a city might tax a $50 transaction up to $10, and then the county or state rate is applied from $10-$50 up to a defined maximum.  CashBox takes care of all these details and applies the correct tax rate for every transaction.

Once all the variables are known, there is one last step before actually applying the tax rate to the transaction. CashBox performs a check for any other merchant specific rules that should be followed for this transaction. Each merchant has the ability to set up specific rules or exemptions by customer, jurisdiction, region, or product. This allows our merchants to decide exactly where and what they wish to collect taxes on and underlines the power and flexibility of CashBox. Merchants can easily handle customer tax exemptions (e.g., if a customer is tax exempt in the EU, and they provide a VAT- ID), incorporate exemptions by product delivery type (e.g., digitally downloadable software versus retail box) and decide which jurisdictions they do and do not need to collect tax in.

While all of these steps may seem complicated, CashBox performs them accurately and consistently in less than a second. CashBox also allows merchants to be flexible and make any necessary changes to their tax policy with regard to specific jurisdictions or products. Lastly, with monthly updates to the tax database, merchants can be confident that any changes in the tax code will be seamlessly reflected in their transactions.

When the time comes to prepare tax filings for each jurisdiction, CashBox's reporting capabilities allow merchants to easily categorize and gather their transactions around multiple criteria (product, jurisdictions, exemptions, etc). CashBox also provides details about each transaction, such as any address fixing, exemptions applied and both pre-tax and after-tax totals.

At the transaction level, CashBox tracks not only the shipping address and the billing address, but the corrected address used for tax calculation. Additional information collected per transaction is the tax rate applied and any merchant or customer exemptions. Whether merchants use the built-in reports or connect directly to the transaction details through the Vindicia API, CashBox greatly simplifies the tax application process even for the most complex tax environments.

## Conclusion

With all of the potential pitfalls around sales and use tax, merchants need an automated and up-to-date method of managing their tax compliance. As a best-of-class billing solution that lets merchants focus on growing their online revenue, Vindicia CashBox includes a comprehensive tax engine that understands tax complexity and efficiently calculates and applies taxes which greatly reduces tax compliance headaches.

CashBox calculates and applies taxes for all online commerce transactions based on the end customer's location. Merchants can then easily gather their sales and use tax obligations by jurisdiction, product or other criteria from CashBox through reports or via the API when preparing their monthly filings. Since the Vindicia tax database is kept up-to-date, all tax calculations will correctly and effortlessly reflect any changes that occur. Tax calculation and compliance assistance are powerful features that enables our merchant customers to focus on what they do best and leave the billing (including taxes) to us.

## About Vindicia

Vindicia offers an integrated, on-demand billing and fraud management solution for online merchants. Vindicia CashBox™ is a best-of-breed billing system for creating and managing recurring payments and helps merchants improve customer retention and maximize profit. Vindicia ChargeGuard™ provides automated fraud screening and chargeback management services that enable merchants to recover lost revenue. A PCI Level 1 Services Provider and SAS 70 Type 2 audited, Vindicia is a key payment management resource for some of the best-known brands on the Internet.